

What is claimed is:

1. A water-based ink comprising colored particles, which comprise a dye and a polymer having an acetal group.
2. The water-based ink of claim 1, wherein no less than 30% of oxygen atoms in the polymer form the acetal groups.
3. The water-based ink of claim 1, wherein the polymer having an acetal group is polyvinyl butyral.
4. The water-based ink of claim 1, wherein the colored particles are composed of a single phase.
5. The water-based ink of claim 4, wherein the polymer having an acetal group in the colored particles accounts for no less than 50 weight-% of the total weight of polymer included in the colored particles.
6. The water-based ink of claim 1, wherein the colored particles have a core-shell structure composed of a core-phase and a shell-phase.
7. The water-based ink of claim 6, wherein the polymer having acetal group in the core-phase of the colored particles accounts for no less than 50 weight-% of the total weight of polymer included in the core-phase of the colored particles.
8. A method for preparing an water-based ink, wherein the method comprising a step of;

dispersing colored particles, which comprise a dye and a polymer having acetal group, into an aqueous medium.

9. The method of claim 8, wherein the polymer having an acetal group is polyvinyl butyral.
10. The method of claim 8, wherein the polymer having an acetal group in the colored particles accounts for no less than 50 weight-% of the total weight of polymer included in the color particles.
11. The method of claim 8, wherein the method further comprising a following step after the dispersing step; adding a polymerizable monomer and polymerization initiator so as to form a shell phase on each of the colored particle.
12. The method of claim 11, wherein the polymer having an acetal group is polyvinyl butyral.
13. The method of claim 11, wherein the polymer having an acetal group in the colored particles accounts for no less than 50 weight-% of the total weight of polymer included in the color particles.